

**REMARKS**

Claim Status

Claims 1-11 and 15-52 are pending in the present application. All claims stand rejected.

Independent Claims 1 and 40 were previously amended and previously presented.

Dependent Claims 2-8, 15-39 and 41-52 are original.

Dependent Claims 9, 10 and 11 were previously amended and previously presented.

Dependent Claims 12-14 were previously canceled.

Rejection Under 35 USC §103(a) Over Everhart and Al-Sabah

In Paragraph 2 of the Office Action dated June 12, 2008, Claims 1-11 and 15-52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Everhart et al. (USPN 5,468,236) in view of Al-Sabah (USPN 5,868,723).

In Paragraph 5 of the Office Action dated June 12, 2008, Claims 1-11, 15-19, 21-25, 36-39, and 40-52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Everhart et al.

In Paragraph 6 of the Office Action dated June 12, 2008, Claims 28-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Everhart et al. in view of Al-Sabah.

Applicants respectfully traverse the rejections.

Under MPEP §2142, the Office bears the burden of factually supporting an asserted *prima facie* conclusion of obviousness. In determining the differences between the cited art and the claims, the question is not whether the differences themselves would

have been obvious, but whether the claimed invention as a whole would have been obvious. *See, e.g., Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537; 218 U.S.P.Q. 871 (Fed. Cir. 1983). If the Office does not demonstrate *prima facie* unpatentability, then without more, the Applicant is entitled to the grant of the patent. *See In re Oetiker*, 977 F.2d 1443, 1445; 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992).

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the Office must show that all of the claim elements are taught or suggested in the prior art. *See, e.g., CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342; 68 U.S.P.Q.2d 1940 (Fed. Cir. 2003).

Independent Claims 1 and 40 both recite an article comprising, *inter alia*, a “biosensor including at least one bio-recognition element adapted to interact selectively with one or more pathogenic microorganisms.” By dependency, all remaining pending claims include these elements.

Without conceding the teaching or suggestion of any other elements of the independent claims in the references cited, and without waiving any other arguments they may have, Applicants respectfully submit that neither Everhart et al. nor Al-Sabah, alone or in combination, teach or suggest an article comprising the biosensor element as recited.

Applicants’ specification describes the biosensor in part as follows:

... As used herein, the term “biosensor” is defined as a component comprising one or more biologically reactive means being adapted to detect one or more target pathogenic microorganisms or related biomolecules (e.g., an enzyme sensor, organella sensor, tissue sensor, microorganism sensor, immunosensor or electrochemical sensor), additionally having the capability to provide a signal of said detection to the wearer, caretaker, or an actuator. The term “biologically reactive” is defined as having the capability to selectively interact with, and preferably bind, target pathogenic microorganisms and/or related biomolecules as described herein. Generally, biosensors function by providing a means of specifically binding, and therefore detecting, a target biologically active analyte. In this way, the biosensor is highly selective, even when presented with a mixture of many chemical and biological entities, such as

feces. Chemical sensors, on the other hand, which rely on chemically reactive means, generally do not have either the high selectivity or the amplification properties of biosensors and, therefore, are not well suited to detect biologically reactive analytes, especially when they are present in low concentrations and/or in a complex media such as bodily waste. Often the target biological analyte is a minor component of a complex mixture comprising a multiplicity of biological and other components. Thus, in many biosensor applications, detection of target analytes to the parts-per-billion, parts-per-trillion, or even lower levels is necessary. Accordingly, discrimination ratios of about  $10^7$ - $10^8$  or greater may be required for the biosensor to recognize the target biological analyte in a complex mixture.

The biosensor of the present invention comprises a bio-recognition element, or molecular recognition element, that provides the highly specific binding or detection selectivity for a particular analyte. The bio-recognition element, or system, may be a biologically derived material such as an enzyme or sequence of enzymes; an antibody; a membrane receptor protein; DNA; an organelle, a natural or synthetic cell membrane; an intact or partial viable or nonviable bacterial, plant or animal cell; or a piece of plant or mammalian tissues, and generally functions to interact specifically with a target biological analyte. The bio-recognition element is responsible for the selective recognition of the analyte and the physico-chemical signal that provides the basis for the output signal.

(Specification, p. 12, lines 20-33; p. 13, lines 1-14.)

Everhart et al. does not teach or suggest a biosensor including at least one bio-recognition element adapted to interact selectively with one or more pathogenic microorganisms. Everhart et al. discloses a “chemically reactive means,” which is *unspecified* except for two examples. In the first example, a “chemically reactive means” is described as adapted to give a visual indication of glucose concentration in urine. (Everhart et al., col. 7, lines 44-46.) In the second example, another “chemically reactive means” is described as adapted to detect nitrite in urine. (Everhart et al., col. 10, lines 43-59.)

Al-Sabah does not teach or suggest the biosensor of Applicants’ claims. Al-Sabah discloses a moisture sensor.

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Docket No. 7537CQ  
Amdt. dated October 13, 2008  
Reply to Office Action mailed on June 12, 2008  
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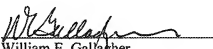
For the foregoing reasons, the combination of Everhart et al. and Al-Sabah does not support a *prima facie* conclusion of obviousness of Applicants' claims. Applicants, therefore, respectfully request that the rejection of claims 1-11 and 15-52 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

### **Conclusion**

This response represents an earnest effort to place the present application in proper form for allowance. In view of the foregoing, reconsideration of this application, and allowance of the pending claims are respectfully requested.

Respectfully submitted,

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